HYDRAULICS AND PNEUMATICS
1982 Editorial Index

Out-of-print copies are available in complete volumes as positive microfilm copies from University Microfilms, 300 N. Zeeb Rd., Ann Arbor, MI 48103.

Basic technology

	Month	Page
Air fixture tests airplane canopies	Sep	84
Analytical approach for sizing a damping accumulator	Sep	71
Basic pneumatics		
Chapter 11: air motors	Jan	91
Chapter 12: rotary actuators	Mar	98
Chapter 13: directional controls	May	70
Chapter 14: flow controls	Jun	62
Chapter 15: flow coefficients	Jul	59
Chapter 16: sensors	Aug	48
Chapter 17: auxiliary components	Sep	73
Chapter 18: conductors and connectors	Nov	61
Calculating pressure drop in hydraulic hose lines, W. W. Paine	Jun	110
Cartridge valves and valve packages: a primer	Dec	44
Choosing the right hose is easy, J. D. Fox	Feb	62
Design idea: electrohydraulic pump controllers simplify accurate swashplate positioning	Feb	14
Does cyclic flow affect hydraulic filter performance	Nov	65
Drain the traps and save the compressor, N. H. Robson	Mar	89
Fine-tune accumulator selection by calculating polytropic exponent K, G. R. Keller	Feb	100
Fluid power in forestry	Aug	45
High water content systems for profit-making designs		
Introduction	Apr	HP-2
System design considerations	Apr	HP-4
Fluid considerations	Apr	HP-10
Waste disposal considerations	Apr	HP-14
What OEMs and users are saying	Apr	HP-23
Product chart	Apr	HP-28
Hydraulic system compensation conserves lift truck power	Sep	120
Hydrostatic transmissions, R. W. Henke, P.E.		
Part 1: introduction	May	85
Part 2: closed circuit	Jun	68
Part 3: corner horsepower	Oct	188
Know your hose, tubing, and fittings		
Part 2: flared fittings	Mar	95
Part 3: flareless, separable, and permanent tube fittings	Apr	90
Part 4: hose construction	May	67
Part 5: hose installation and maintenance, J. Briggs	Jun	72
Part 6: Testing hydraulic hose	Jul	57
Part 7: A guide to good tube working practices, L. Kowal	Aug	54
Part 8: Routing hoses and tubing	Sep	88
Noise analysis and control in fluid power systems, H. R. Martin		
Part 1: fundamentals, pressure and power level calculations, and measurements	Jan	296
Part 2: basic instrumentation and octave band filters	Mar	91
Part 3: source of noise	May	118
Part 4: impedances & estimating noise levels	Sep	77
Novel combinations of fixed and variable pumps save energy, W. D. MacLennan	May	57
Padful of pneumatic design tips	Nov	57
Pitfalls the inexperienced fluid power system designer should avoid	Oct	152
Selecting electric motors to drive hydraulic pumps, J. E. Thomas	Jul	63
Shifting gears with fluid power, D. E. Ganthier	Feb	59
Simple electronics control servo-type hydraulic action	Mar	28
Small can be beautiful, too ... in pneumatic robots	Feb	12
Transducers: "the eyes and ears" of fluid power control, E. E. Herceg		
Part 1: displacement and velocity	Jun	65
Part 1: displacement and velocity (continued)	Aug	59
Turn on with air motors, A Staff Report	Feb	66
Understanding air coalescing compressed air filters, D. R. Foltz		
Part 2: the DOP Penetration Test	Jan	268
Part 3: in service testing	Apr	86

Books, education, and training

	Month	Page
Basic pneumatics		
Chapter 11: air motors	Jan	91
Chapter 12: rotary actuators	Mar	98
Chapter 13: directional controls	May	70
Chapter 14: flow controls	Jun	62
Chapter 15: flow coefficients	Jul	59
Chapter 16: sensors	Aug	48
Chapter 17: auxiliary components	Sep	73
Chapter 18: conductors and connectors	Nov	61
Fluid power in Fortune's 500, C. L. Mackin	Aug	85
Hydrostatic transmissions, R. W. Henke, P.E.		
Part 1: introduction	May	85
Part 2: closed circuit	Jun	68
Part 3: corner horsepower	Oct	188
Know your hose, tubing, and fittings		
Part 2: flared fittings	Mar	95
Part 3: flareless, separable, and permanent tube fittings	Apr	90
Part 4: hose construction	May	67
Part 5: hose installation and maintenance, J. Briggs	Jun	72
Part 6: Testing hydraulic hose	Jul	57
Part 7: A guide to good tube working practices, L. Kowal	Aug	54
Part 8: Routing hoses and tubing	Sep	88
Noise analysis and control in fluid power systems, H. R. Martin		
Part 1: fundamentals, pressure and power level calculations, and measurements	Jan	296
Part 2: basic instrumentation and octave band filters	Mar	91
Part 3: source of noise	May	118
Part 4: impedances & estimating noise levels	Sep	77
Vacuum systems move pharmaceutical materials.	Sep	14
A year of change in American business, M. Greenfield	Jan	87

Circuit and system design

	Month	Page
Air fixture tests airplane canopies	Sep	84
Air logic speeds die casting leakage test	Nov	12
Analytical approach for sizing a damping accumulator	Sep	71
Closed loop lifts service boats above the waves	May	12
Design idea: bell crank/valve arrangement levels hydraulic press platen	Sep	16
Design idea: engine speed controls pump stroke	Dec	14
Electronic control holds grape-harvester platform level	Dec	12
Fluid logic sweetens sugar cane planting	Oct	142
Fluid power regulates free-rolling freight car speed	Apr	10

HYDRAULICS AND PNEUMATICS
1982 Editorial Index

Out-of-print copies are available in complete volumes as positive microfilm copies from University Microfilms, 300 N. Zeeb Rd., Ann Arbor, MI 48103.

Basic technology

	Month	Page
Air fixture tests airplane canopies	Sep	84
Analytical approach for sizing a damping accumulator	Sep	71
Basic pneumatics		
Chapter 11: air motors	Jan	91
Chapter 12: rotary actuators	Mar	98
Chapter 13: directional controls	May	70
Chapter 14: flow controls	Jun	62
Chapter 15: flow coefficients	Jul	59
Chapter 16: sensors	Aug	48
Chapter 17: auxiliary components	Sep	73
Chapter 18: conductors and connectors	Nov	61
Calculating pressure drop in hydraulic hose lines, W. W. Paine	Jun	110
Cartridge valves and valve packages: a primer	Dec	44
Choosing the right hose is easy, J. D. Fox	Feb	62
Design idea: electrohydraulic pump controllers simplify accurate swashplate positioning	Feb	14
Does cyclic flow affect hydraulic filter performance	Nov	65
Drain the traps and save the compressor, N. H. Robson	Mar	89
Fine-tune accumulator selection by calculating polytropic exponent K, G. R. Keller	Feb	100
Fluid power in forestry	Aug	45
High water content systems for profit-making designs		
Introduction	Apr	HP-2
System design considerations	Apr	HP-4
Fluid considerations	Apr	HP-10
Waste disposal considerations	Apr	HP-14
What OEMs and users are saying	Apr	HP-23
Product chart	Apr	HP-28
Hydraulic system compensation conserves lift truck power	Sep	120
Hydrostatic transmissions, R. W. Henke, P.E.		
Part 1: introduction	May	85
Part 2: closed circuit	Jun	68
Part 3: corner horsepower	Oct	188
Know your hose, tubing, and fittings		
Part 2: flared fittings	Mar	95
Part 3: flareless, separable, and permanent tube fittings	Apr	90
Part 4: hose construction	May	67
Part 5: hose installation and maintenance, J. Briggs	Jun	72
Part 6: Testing hydraulic hose	Jul	57
Part 7: A guide to good tube working practices, L. Kowal	Aug	54
Part 8: Routing hoses and tubing	Sep	88
Noise analysis and control in fluid power systems, H. R. Martin		
Part 1: fundamentals, pressure and power level calculations, and measurements	Jan	296
Part 2: basic instrumentation and octave band filters	Mar	91
Part 3: source of noise	May	118
Part 4: impedances & estimating noise levels	Sep	77
Novel combinations of fixed and variable pumps save energy, W. D. MacLennan	May	57
Padful of pneumatic design tips	Nov	57
Pitfalls the inexperienced fluid power system designer should avoid	Oct	152
Selecting electric motors to drive hydraulic pumps, J. E. Thomas	Jul	63
Shifting gears with fluid power, D. E. Ganthier	Feb	59
Simple electronics control servo-type hydraulic action	Mar	28
Small can be beautiful, too ... in pneumatic robots	Feb	12
Transducers: "the eyes and ears" of fluid power control, E. E. Herceg		
Part 1: displacement and velocity	Jun	65
Part 1: displacement and velocity (continued)	Aug	59
Turn on with air motors, A Staff Report	Feb	66
Understanding air coalescing compressed air filters, D. R. Foltz		
Part 2: the DOP Penetration Test	Jan	268
Part 3: in service testing	Apr	86

Books, education, and training

	Month	Page
Basic pneumatics		
Chapter 11: air motors	Jan	91
Chapter 12: rotary actuators	Mar	98
Chapter 13: directional controls	May	70
Chapter 14: flow controls	Jun	62
Chapter 15: flow coefficients	Jul	59
Chapter 16: sensors	Aug	48
Chapter 17: auxiliary components	Sep	73
Chapter 18: conductors and connectors	Nov	61
Fluid power in Fortune's 500, C. L. Mackin	Aug	85
Hydrostatic transmissions, R. W. Henke, P.E.		
Part 1: introduction	May	85
Part 2: closed circuit	Jun	68
Part 3: corner horsepower	Oct	188
Know your hose, tubing, and fittings		
Part 2: flared fittings	Mar	95
Part 3: flareless, separable, and permanent tube fittings	Apr	90
Part 4: hose construction	May	67
Part 5: hose installation and maintenance, J. Briggs	Jun	72
Part 6: Testing hydraulic hose	Jul	57
Part 7: A guide to good tube working practices, L. Kowal	Aug	54
Part 8: Routing hoses and tubing	Sep	88
Noise analysis and control in fluid power systems, H. R. Martin		
Part 1: fundamentals, pressure and power level calculations, and measurements	Jan	296
Part 2: basic instrumentation and octave band filters	Mar	91
Part 3: source of noise	May	118
Part 4: impedances & estimating noise levels	Sep	77
Vacuum systems move pharmaceutical materials.	Sep	14
A year of change in American business, M. Greenfield	Jan	87

Circuit and system design

	Month	Page
Air fixture tests airplane canopies	Sep	84
Air logic speeds die casting leakage test	Nov	12
Analytical approach for sizing a damping accumulator	Sep	71
Closed loop lifts service boats above the waves	May	12
Design idea: bell crank/valve arrangement levels hydraulic press platen	Sep	16
Design idea: engine speed controls pump stroke	Dec	14
Electronic control holds grape-harvester platform level	Dec	12
Fluid logic sweetens sugar cane planting	Oct	142
Fluid power regulates free-rolling freight car speed	Apr	10

1982 Editorial Index

	Month	Page
High water content systems for profit-making designs System design considerations	Apr	HP-4
Hot, high-speed hydraulics	Dec	35
How do you hug a 7-ton elephant? Hydraulically . . . at Portland's zoo	Aug	12
Hydraulic measuring system positions bundles of coiled wire	Sep	82
Hydraulic system compensation conserves lift truck power	Sep	120
Hydraulics extends radio observatory's celestial ear	Oct	137
Hydrostatic transmissions, R. W. Henke, P.E.		
Part 1: introduction	May	85
Part 2: closed circuit	Jun	68
Part 3: corner horsepower	Oct	188
Know your hose, tubing, and fittings		
Part 8: Routing hoses and tubing	Sep	88
Minicomputer controls robot's six electrohydraulic servo-actuators, E. Jacobs	Feb	53
Padful of pneumatic design tips	Nov	57
Pitfalls the inexperienced fluid power system designer should avoid	Oct	152
Pneumatics helps light the sky, M. J. Vilenius and T. K. Virvalo	Jul	53
Shifting gears with fluid power, D. E. Gauthier	Feb	59
Stacked pneumatic cylinders automate conveyor belt operations	Nov	96

Components

	Month	Page
Accumulators, quick guide to product selection	Jan	132
Actuators, rotary, quick guide to product selection	Jan	133
Air logic devices, quick guide to product selection	Jan	134
Analytical approach for sizing a damping accumulator	Sep	71
Basic pneumatics		
Chapter 11: air motors	Jan	91
Chapter 12: rotary actuators	Mar	98
Chapter 13: directional controls	May	70
Chapter 14: flow controls	Jun	62
Chapter 16: sensors	Aug	48
Chapter 17: auxiliary components	Sep	73
Chapter 18: conductors and connectors	Nov	61
Cartridge valves and valve packages: a primer	Dec	44
Clutches & brakes, quick guide to product selection	Jan	135
Compressors, vacuum pumps & blowers, quick guide to product selection	Jan	136
Couplings, quick-acting, hydraulic, quick guide to product selection	Jan	137
Couplings, quick-acting, pneumatic, quick guide to product selection	Jan	138
Cylinders, quick guide to product selection	Jan	139
Design idea: electrohydraulic pump controllers simplify accurate swashplate positioning	Feb	14
Design update: New valves, springs assure DC-10 wing slot extension	Nov	14
Drain the traps and save the compressor, N. H. Robson	Mar	89
Dryers, quick guide to product selection	Jan	142
Filters, air line, quick guide to product selection	Jan	143
Filters, hydraulic, quick guide to product selection	Jan	145
Fine-tune accumulator selection by calculating polytropic exponent K, G. R. Keller	Feb	100
Fittings, tube & port, hydraulic, quick guide to product selection	Jan	147
Fittings, tube & port, pneumatic, quick guide to product selection	Jan	148
Fluids, hydraulic, quick guide to product selection	Jan	149
Gages, pressure & flow, hydraulic, quick guide to product selection	Jan	151
Gages, pressure & flow, pneumatic, quick guide to product selection	Jan	152
Heat exchangers, quick guide to product selection	Jan	153
High water content systems for profit-making designs System design considerations	Apr	HP-4
Hose, hose fittings & hose assemblies, hydraulic, quick guide to product selection	Jan	154
Hose, hose fittings & hose assemblies, pneumatic, quick guide to product selection	Jan	155
Hydrostatic drives, quick guide to product selection	Jan	156
Intensifiers, quick guide to product selection	Jan	157
Interface devices, quick guide to product selection	Jan	161
Joints, rotating & swivel, hydraulic & pneumatic, quick guide to product selection	Jan	158
LSHT hydraulic motors power pipelay reel	Nov	53
Lubricators, quick guide to product selection	Jan	159
Manifolds, quick guide to product selection	Jan	160
Motors, air, quick guide to product selection	Jan	179
Motors, hydraulic, quick guide to product selection	Jan	162
Motors, low-speed/high-torque, quick guide to product selection	Jan	180
Pumps, quick guide to product selection	Jan	181
Pumps, air-operated, quick guide to product selection	Jan	157
Pumps, hand-operated, quick guide to product selection	Jan	157
Repair & reconditioning service, quick guide to product selection	Jan	183
Reservoirs & accessories, quick guide to product selection	Jan	184
Sealants/adhesives, anaerobic compounds, quick guide to product selection	Jan	185
Seals, scrapers, back-up rings, & boots, quick guide to product selection	Jan	186
Selecting electric motors to drive hydraulic pumps, J. E. Thomas	Jul	63
Shifting gears with fluid power, D. E. Gauthier	Feb	59
Shock absorbers & dampers, quick guide to product selection	Jan	185
Stacked pneumatic cylinders automate conveyor belt operations	Nov	96
Switches, flow, quick guide to product selection	Jan	187
Switches, level, quick guide to product selection	Jan	144
Switches, limit & proximity, quick guide to product selection	Jan	188
Switches, pressure & temperature, hydraulic, quick guide to product selection	Jan	189
Switches, pressure & temperature, pneumatic, quick guide to product selection	Jan	190
Transducers, pressure, quick guide to product selection	Jan	191
Transducers: the "eyes and ears" of fluid power control, E. E. Herceg		
Part 1: displacement and velocity	Jun	65
Part 1: displacement and velocity (continued)	Aug	59
Tubing, quick guide to product selection	Jan	192
Turn on with air motors, A Staff Report	Feb	66
Understanding air coalescing compressed air filters, D. R. Foltz		
Part 2: the DOP Penetration Test	Jan	268
Part 3: in service testing	Apr	86
Valves, directional control, quick guide to product selection	Jan	193
Valves, electrohydraulic servo, quick guide to product selection	Jan	197
Valves, flow control, quick guide to product selection	Jan	198
Valves, pressure control, quick guide to product selection	Jan	201

Conductors, couplings, fittings

	Month	Page
Basic pneumatics		
Chapter 18: conductors and connectors	Nov	61
Calculating pressure drop in hydraulic hose lines, W. W. Paine	Jun	110
Choosing the right hose is easy, J. D. Fox	Feb	62
Couplings, quick-acting, hydraulic, quick guide to product selection	Jan	137
Couplings, quick-acting, pneumatic, quick guide to product selection	Jan	138
Fittings, tube & port, hydraulic, quick guide to product selection	Jan	147
Fittings, tube & port, pneumatic, quick guide to product selection	Jan	148
Hose, hose fittings & hose assemblies, hydraulic, quick guide to product selection	Jan	154
Hose, hose fittings & hose assemblies, pneumatic, quick guide to product selection	Jan	155
Joints, rotating & swivel, hydraulic & pneumatic, quick guide to product selection	Jan	158
Know your hose, tubing, and fittings		
Part 2: flared fittings	Mar	95
Part 3: flareless, separable, and permanent tube fittings	Apr	90
Part 4: hose construction	May	67
Part 5: hose installation and maintenance, J. Briggs	Jun	72
Part 6: Testing hydraulic hose	Jul	57
Part 7: A guide to good tube working practices, L. Kowal	Aug	54
Part 8: Routing hoses and tubing	Sep	88
Tubing, quick guide to product selection	Jan	192

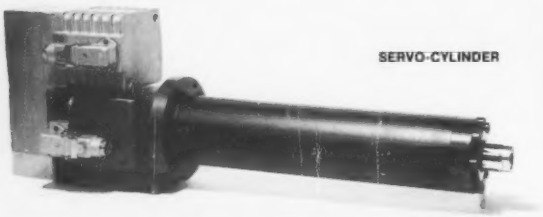
This index will be continued in subsequent issues of HYDRAULICS & PNEUMATICS.

There is Only One

Servo-Hydraulic System which offers:

- Faster Response
- Greater Precision
- More Reliability

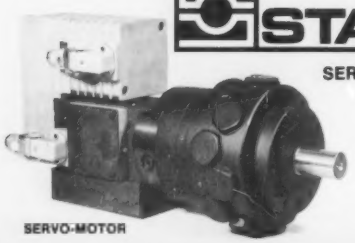
And is virtually Maintenance Free.



SERVO-CYLINDER

Stauff, a worldwide manufacturer of hydraulic accessories and components, offers a revolutionary concept which outperforms any existing design. Using an improved hydraulic torque amplifier with internal, mechanical feedback and a patented, four way valve with four distinct and separate poppets, the Stauff servo-valve combines speed, accuracy and eliminates downtime for service and filter changes.

Stauff servo-valves are available in sizes and configurations to meet your specific requirements, both as separate units for custom applications and as actuators with integrated valves. Contact Stauff for free specifications and engineering data.



SERVO-MOTOR

STAUFF®

SERVO-HYDRAULICS

21-23 Industrial Park
Waldwick, NJ 07463

201-444-7800

Telex: 13-4465

©STAUFF 1982

Visit our booth #976 at the Design Engineering Show

Circle 144

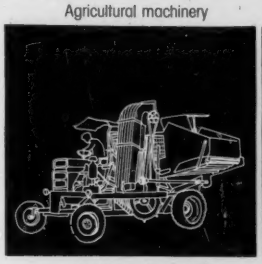
HYDRAULICS & PNEUMATICS 1982 Editorial Index

Out-of-print copies are available in complete volumes as positive microfilm copies from University Microfilms, 300 N. Zeeb Rd., Ann Arbor, MI 48103.

	Month	Page
Controls, instrumentation, transducers		
Air-powered intensifier meters lubricant	Jan	16
Basic pneumatics		
Chapter 13: directional controls	May	70
Chapter 14: flow controls	Jun	62
Chapter 16: sensors	Aug	48
Chapter 17: auxiliary components	Sep	73
Design idea: engine speed controls pump stroke	Dec	14
Easily-programmable air logic controls pneumatic robot	Jun	12
Fluid power regulates free-rolling freight car speed	Apr	10
Gages, pressure & flow, hydraulic, quick guide to product selection	Jan	151
Gages, pressure & flow, pneumatic, quick guide to product selection	Jan	152
Hydraulic measuring system positions bundles of coiled wire	Sep	82
Interface devices, quick guide to product selection	Jan	161
Manual electrohydraulic controller smooths work platform motion	Oct	14
Minicomputer controls robot's six electrohydraulic servo-actuators, E. Jacobs	Feb	53
Noise analysis and control in fluid power systems, H. R. Martin		
Part 2: basic instrumentation and octave band filters	Mar	91
Piloted valves control system pressure of forestry yarder, T. Jasumback and M. Clifford	Jun	58
Shifting gears with fluid power, D. E. Gauthier	Feb	59
Switches, limit & proximity, quick guide to product selection	Jan	188

A MULTITUDE OF APPLICATIONS
AND MANY PRODUCTS
FROM A SINGLE SUPPLIER

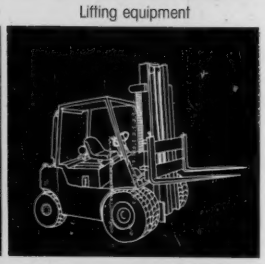
Agricultural machinery



Construction machinery

Mobile equipment

Lifting equipment



oleodinamica
Casappa
spa

43044 CAVALLI DI COLLECCHIO - PARMA - ITALY
TEL. (0521) 804321 - 804101 - 804147 TELEX CASAPPA 530364

Circle 152

1982 Editorial Index

	Month	Page
Switches, pressure & temperature, hydraulic, quick guide to product selection	Jan	189
Switches, pressure & temperature, pneumatic, quick guide to product selection	Jan	190
Transducers, pressure, quick guide to product selection	Jan	191
Transducers: the "eyes and ears" of fluid power control, E. E. Herceg		
Part 1: displacement and velocity	Jun	65
Part 1: displacement and velocity (continued)	Aug	59
Valves, directional control, quick guide to product selection	Jan	193
Valves, electrohydraulic servo, quick guide to product selection	Jan	197
Valves, flow control, quick guide to product selection	Jan	198

Electronic components and controls

Design idea: electrohydraulic pump controllers simplify accurate swashplate positioning	Feb	14
Electronic control holds grape-harvester platform level	Dec	12
Minicomputer controls robot's six electrohydraulic servo-actuators, E. Jacobs	Feb	53
Selecting electric motors to drive hydraulic pumps, J. E. Thomas	Jul	63
Simple electronics control servo-type hydraulic action	Mar	28
Switches, limit & proximity, quick guide to product selection	Jan	188
Valves, electrohydraulic servo, quick guide to product selection	Jan	197

Fluids, filters, heat exchangers

Does cyclic flow affect hydraulic filter performance	Nov	65
Filters, air line, quick guide to product selection	Jan	143
Filters, hydraulic, quick guide to product selection	Jan	145
Fluids, hydraulic, quick guide to product selection	Jan	149

Fluids, filters, heat exchangers

Heat exchangers, quick guide to product selection	Jan	153
High water content systems for profit-making designs		
System design considerations	Apr	HP-4
Fluid considerations	Apr	HP-10
Waste disposal considerations	Apr	HP-14
Ideas and applications	Apr	HP-18
What OEMs and users are saying	Apr	HP-23
Understanding air coalescing compressed air filters, D. R. Foltz		
Part 2: the DOP Penetration Test	Jan	26ð
Part 3: in service testing	Apr	86

Industrial equipment

Air-powered intensifier meters lubricant	Jan	16
Design idea: bell crank/valve arrangement levels hydraulic press platen	Sep	16
Design idea: electrohydraulic pump controllers simplify accurate swashplate positioning	Feb	14
Dryers, quick guide to product selection	Jan	142
Easily-programmable air logic controls pneumatic robot	Jun	12
High water content systems for profit-making designs		
Ideas and applications	Apr	HP-18
Hydraulic measuring system positions bundles of coiled wire	Sep	82
Hydraulic system compensation conserves lift truck power	Sep	120
Hydrostatic drive stacker/reclaimer moves mounds of fuel	Jan	12
Intensifiers, quick guide to product selection	Jan	157
Lubricators, quick guide to product selection	Jan	159
Minicomputer controls robot's six electrohydraulic servo-actuators, E. Jacobs	Feb	53
Palletizer stacks pneumatically, W. P. Roberts	May	64
Pneumatic lapper improves spline finishes	Dec	40
Pneumatics in the textile industry, S. W. Birch	Jun	55
Pneumatics helps light the sky, M. J. Vilenius and T. K. Virvalo	Jul	53
Small can be beautiful, too ... in pneumatic robots	Feb	12
Vacuum systems move pharmaceutical materials.	Sep	14

1982 Editorial Index

	Month	Page
Linear actuators, shock absorbers, intensifiers		
Air-powered intensifier meters lubricant	Jan	16
Cylinders, quick guide to product selection	Jan	139
Intensifiers, quick guide to product selection	Jan	157
Shock absorbers & dampers, quick guide to product selection	Jan	185
Maintenance, repair, and testing		
Air fixture tests airplane canopies	Sep	84
Does cyclic flow affect hydraulic filter performance	Nov	65
Drain the traps and save the compressor, N. H. Robson	Mar	89
Know your hose, tubing, and fittings		
Part 5: hose installation and maintenance, J. Briggs	Jun	72
Part 6: Testing hydraulic hose	Jul	57
Part 7: A guide to good tube working practices, L. Kowal	Aug	54
Noise analysis and control in fluid power systems, H. R. Martin		
Part 1: fundamentals, pressure and power level calculations, and measurements	Jan	296
Part 2: basic instrumentation and octave band filters	Mar	91
Part 4: impedances & estimating noise levels	Sep	77
Repair & reconditioning service, quick guide to product selection	Jan	183
Mobile and marine		
Closed loop lifts service boats above the waves	May	12
Competitive pulling tractor goes hydrostatic	Jul	12
Design idea: engine speed controls pump stroke	Dec	14
Electronic control holds grape-harvester platform level	Dec	12
Fluid power regulates free-rolling freight car speed	Apr	10
Hydraulic system compensation conserves lift truck power	Sep	120
LSHT hydraulic motors power pipelay reel	Nov	53
Piloted valves control system pressure of forestry yarder, T. Jasumback and M. Clifford	Jun	58
Shifting gears with fluid power, D. E. Gauthier	Feb	59
Pneumatic components and equipment		
Actuators, rotary, quick guide to product selection	Jan	133
Air fixture tests airplane canopies	Sep	84
Air logic devices, quick guide to product selection	Jan	134
Air-powered intensifier meters lubricant	Jan	16
Basic pneumatics		
Chapter 11: air motors	Jan	91
Chapter 12: rotary actuators	Mar	98
Chapter 13: directional controls	May	70
Chapter 14: flow controls	Jun	62
Chapter 16: sensors	Aug	48
Chapter 17: auxiliary components	Sep	73
Cartridge valves and valve packages: a primer	Dec	44
Compressors, vacuum pumps & blowers, quick guide to product selection	Jan	136
Couplings, quick-acting, pneumatic, quick guide to product selection	Jan	138
Cylinders, quick guide to product selection	Jan	139
Drain the traps and save the compressor, N. H. Robson	Mar	89
Dryers, quick guide to product selection	Jan	142
Easily-programmable air logic controls pneumatic robot	Jun	12
Filters, air line, quick guide to product selection	Jan	143
Fine-tune accumulator selection by calculating polytropic exponent K, G. R. Keller	Feb	100
Fittings, tube & port, pneumatic, quick guide to product selection	Jan	148
Gages, pressure & flow, pneumatic, quick guide to product selection	Jan	152

NOW... make the RHAM connection for all the right reasons

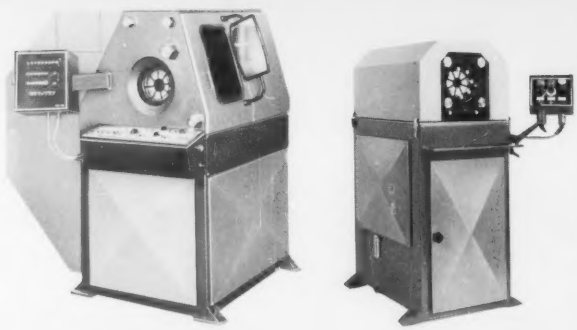
Get maximum hose crimping productivity and profitability with RHAM — the fastest hydraulic hose crimpers on the market today. State of the art electronic sensors provide reliable repeat accuracy crimp after crimp. Simplified controls mean easy operation and training for even your newest employee. Die changeover and setup is completed in 3 minutes or less. Offer more benefits to your customers with speed, accuracy, and increased capacity up to 2" 6-spiral 90 degree bent tube assemblies. And RHAM gives years of uninterrupted service.

RHAM models offer flexibility, capability, and features to meet your requirements. For a demonstration, or additional information and specifications, call or write:

BROCK
P.O. Box 218,
Crystal Lake, IL 60014
Telex 722-469

(815) 459-4210

Or, ask your hose supplier about RHAM — Rapid Hose Assembly Equipment.



Features include:

- Accurate, repeatable electronic controls.
- Dual function depth stop/locator.
- 3 modes of operation.
- 2" 6-spiral capacity.
- 2 to 4 seconds crimp cycle time.
- Fast, easy "Pull Pin" die changeover.
- Model P40 memory system locates selected crimp die head from rotating storage bank of 10 die heads. Exact crimp diameter is automatically recalled from easily programmed hose size and type matrix.

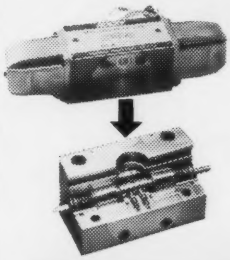
Circle 153

TIME & LABOR SAVING

YAMADA'S *ROCKY* POWER

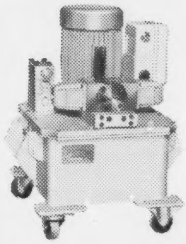
"New Model"
ROCKY SOLENOID CONTROL VALVES

You can replace electromagnet with one - touch and you don't have to connect complicated wiring.



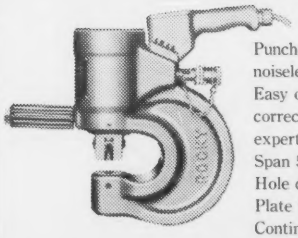
4way 3position control valve for automatical advance and retreat of double acting rams.
Working pressure 10,000psi (700kg/cm²)
Little leakage for frequent action.

ROCKY MASTER



Motor driven, compact, light, two stage pump
Series 1.5kW - 15kW
with 4way 3position solenoid valve
Working pressure 10,000psi (700kg/cm²)

ROCKY HYDRAULIC PUNCHER



Punches precise holes, noiseless without vibration
Easy operation to set the correct position without expert
Span 55mm - 110mm
Hole dia 14mm - 27.5mm
Plate thickness 10mm - 25mm
Continious works by automatic double acting ram.

Yamada Industrial Co., Ltd.

Head Office : 15-15, 1-chome, Sanno, Hakata-ku, Fukuoka 812 Japan
Tel. : 092-472-7311 Telex : 725-822 J
Tokyo Office : 21-11 3-chome, Toyotama-Minami, Nerima-ku, Tokyo 176 Japan
Tel. : 03-994-7471 Telex : 272-3173 J

Circle 130

1982 Editorial Index

	Month	Page
Heat exchangers, quick guide to product selection	Jan	153
Hose, hose fittings & hose assemblies, pneumatic, quick guide to product selection	Jan	155
Interface devices, quick guide to product selection	Jan	161
Joints, rotating & swivel, hydraulic & pneumatic, quick guide to product selection	Jan	158
Lubricators, quick guide to product selection	Jan	159
Manifolds, quick guide to product selection	Jan	160
Motors, air, quick guide to product selection	Jan	179
Padful of pneumatic design tips	Nov	57
Palletizer stacks pneumatically, W. P. Roberts	May	64
Pneumatic lapper improves spline finishes	Dec	40
Pneumatics in the textile industry, S. W. Birch	Jun	55
Pneumatics helps light the sky, M. J. Vilenius and T. K. Virvalo	Jul	53
Pumps, air-operated, quick guide to product selection	Jan	157
Shifting gears with fluid power, D. E. Gauthier	Feb	59
Shock absorbers & dampers, quick guide to product selection	Jan	185
Small can be beautiful, too ... in pneumatic robots	Feb	12
Stacked pneumatic cylinders automate conveyor belt operations	Nov	96
Switches, pressure & temperature, pneumatic, quick guide to product selection	Jan	190
Turn on with air motors, A Staff Report	Feb	66
Understanding air coalescing compressed air filters, D. R. Foltz		
Part 2: the DOP Penetration Test	Jan	268
Part 3: in service testing	Apr	86
Vacuum systems move pharmaceutical materials.	Sep	14
Valves, directional control, quick guide to product selection	Jan	193
Valves, electrohydraulic servo, quick guide to product selection	Jan	197
Valves, flow control, quick guide to product selection	Jan	198
Valves, pressure control, quick guide to product selection	Jan	201

Pneumatic and fluidic logic

Air logic devices, quick guide to product selection	Jan	134
Air logic speeds die casting leakage test	Nov	12
Easily-programmable air logic controls pneumatic robot	Jun	12
Fluid logic sweetens sugar cane planting	Oct	142

Pumps and power packages

Compressors, vacuum pumps & blowers, quick guide to product selection	Jan	136
Design idea: engine speed controls pump stroke	Dec	14
Motors, air, quick guide to product selection	Jan	179
Motors, hydraulic, quick guide to product selection	Jan	162
Motors, low-speed/high-torque, quick guide to product selection	Jan	180
Novel combinations of fixed and variable pumps save energy, W. D. MacLennan	May	57
Pumps, quick guide to product selection	Jan	181
Pumps, air-operated, quick guide to product selection	Jan	157
Pumps, hand-operated, quick guide to product selection	Jan	157
Selecting electric motors to drive hydraulic pumps, J. E. Thomas	Jul	63
Vacuum systems move pharmaceutical materials.	Sep	14

Rotary actuators, fluid motors, HSTs

Basic pneumatics		
Chapter 12: rotary actuators	Mar	98
Competitive pulling tractor goes hydrostatic	Jul	12
Custom-built, fully-hydrostatic transmission powers motorcycle	Mar	12
Hydraulics extends radio observatory's celestial ear	Oct	137
Hydrostatic drive stacker/reclaimer moves mounds of fuel	Jan	12
Hydrostatic drives, quick guide to product selection	Jan	156
Hydrostatic transmissions, R. W. Henke, P.E.		
Part 1: introduction	May	85
Part 2: closed circuit	Jun	68
Part 3: corner horsepower	Oct	188

1982 Editorial Index

	Month	Page
LSHT hydraulic motors power pipelay reel	Nov	53
Turn on with air motors, A Staff Report	Feb	66

Seals and packings

Sealants/adhesives, anaerobic compounds, quick guide to product selection	Jan	185
Seals, scrapers, back-up rings, & boots, quick guide to product selection	Jan	186

Servo systems and components

Minicomputer controls robot's six electrohydraulic servo-actuators, E. Jacobs	Feb	53
Simple electronics control servo-type hydraulic action	Mar	28
Valves, electrohydraulic servo, quick guide to product selection	Jan	197

Valves

Basic pneumatics		
Chapter 13: directional controls	May	70
Chapter 14: flow controls	Jun	62
Chapter 17: auxiliary components	Sep	73
Cartridge valves and valve packages: a primer	Dec	44
Design update: New valves, springs assure DC-10 wing slot extension	Nov	14
Piloted valves control system pressure of forestry yarder, T. Jasumback and M. Clifford	Jun	58
Pitfalls the inexperienced fluid power system designer should avoid	Oct	152
Switches, flow, quick guide to product selection	Jan	187
Switches, level, quick guide to product selection	Jan	144
Valves, directional control, quick guide to product selection	Jan	193
Valves, electrohydraulic servo, quick guide to product selection	Jan	197
Valves, flow control, quick guide to product selection	Jan	198
Valves, pressure control, quick guide to product selection	Jan	201

Product liability

High water content systems for profit-making designs Waste disposal considerations	Apr	HP-14

Fluid power company profiles

Face to face, Abex Corp., Denison Div.	Nov	86
Face to face, Ace Controls Inc.	Jul	70
Face to face, Aeroquip Corp.	Aug	78
Face to face, Airoyal Company	Feb	88
Face to face, Dynapower	Oct	184
Face to face, Imperial clevite inc.	Sep	96
Face to face, The C.A. Norgren Company	Jan	263
Face to face, Pall Corp.	Jun	90
Face to face, The Paquin Co.	Mar	106
Face to face, Sundstrand Corp.	Apr	114
Face to face, Watts Fluidair	May	96

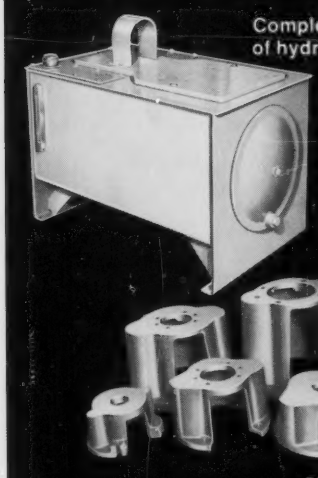
Author index

Acharya, R., Pitfalls the inexperienced fluid power system designer should avoid	Oct	152
Birch, S.W., Pneumatics in the textile industry	Jun	55
Brechun, D. M., Hydraulic measuring system positions bundles of coiled wire	Sep	82
Briggs, J., Know your hoses, tubings[and fittings Part 5: Hose installation and maintenance	Jun	72
Chun Yi, Zeng, Analytical approach for sizing a damping accumulator	Sep	71

New! Compact
"Miti-Mini-Jac"
Cylinders
65% shorter than conventional cylinders, requires 60% less mounting space!
• Rapid response; high clamping force relative to external size.
• Excellent for clamping fixtures, jig work, tight spaces, high speed cycling, etc.
• Low profile single and double acting cylinders available in 5/16" to 2 1/2" bore.
CONVENTIONAL CYLINDER
NEW "MITI-MINI-JAC" CYLINDER
FESTO
PNEUMATIC
395 MORELAND ROAD,
HAUPPAUGE, NY 11788
TEL. (516) 435-0800
Write or call for free literature

COMPLETE STOCK . . . PROMPT DELIVERY

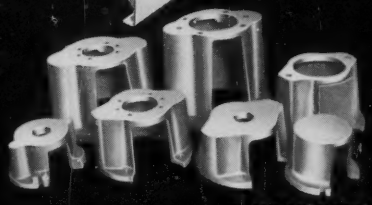
Hydraulic Reservoirs



Complete standardized line of hydraulic reservoirs. . .

- ☐ Conventional
- ☐ "L" Shaped
- ☐ Overhead

All three types available in 12 sizes: from 5 to 2,000 gallons



PUMP/MOTOR MOUNTS
Frame sizes from 56C to 445 TSC

Send for brochure

Telephone: 816/421-1790

SYSTEMS MACHINERY ENGINEERING INC.
1342 WOODSWETHER ROAD • KANSAS CITY, MO. 64105

Circle **154**

CHEMIQUIP

LOW-COST, RELIABLE INSTRUMENT PROTECTION

POROUS-METAL PRESSURE SNUBBERS TO PROTECT...

- Piezoelectric Transducers
- Manometers
- Gages
- Solenoid Valves
- Pressure Switches
- Pressure-Controlled Valves
- Other Pressure Sensors

Available in Powdered 316 Stainless Steel or Monel for corrosion resistance...for both hydraulic and pneumatic systems. And—they are maintenance-free!

Chemiquip snubbers are precision engineered to protect pressure-sensitive instruments against damaging pulsation and surges. They filter out harmful solids, assuring steady, accurate pressure readings. They are ideal for all types of industrial and chemical systems, as well as aircraft, automotive and refrigeration applications. For complete data, write today for a free 16-page catalog.

CHEMIQUIP PRODUCTS CO., INC.
3 West 18 St., New York, N.Y. 10011 • 212/691-2330
80-1

Circle **57**

1982 Editorial Index

	Month	Page
Clifford, M., P.E., LSHT hydraulic motors power pipelay reel	Nov	53
Clifford, M., Piloted valves control system pressure of forestry yarder	Jun	58
DeGrey, R. P., Hot, high-speed hydraulics	Dec	35
Dotter, R. J., Hydraulic system compensation conserves lift truck power	Sep	120
Eng, B. S., Pneumatic lapper improves spline finishes	Dec	40
Foltz, D.R., Understanding air coalescing compressed air filters		
Part 2: the DOP Penetration Test	Jan	268
Part 3: in service testing	Apr	86
Fox, J.D., Choosing the right hose is easy	Feb	62
Gauthier, D.E., Shifting gears with fluid power	Feb	59
Gehrking, J., Does cyclic flow affect hydraulic filter performance	Nov	65
Greenfield, M., A year of change in American business	Jan	87
Henke, P.E., R.W., Hydrostatic transmissions		
Part 1: introduction	May	85
Part 2: closed circuit	Jun	68
Part 3: corner horsepower	Oct	188
Herceg, E.E., Transducers: the "eyes and ears" of fluid power control		
Part 1: displacement and velocity	Jun	65
Part 1: displacement and velocity (continued)	Aug	59
Hermes, R., A padful of pneumatic design tips	Nov	57
Jacobs, E., Minicomputer controls robot's six electro-hydraulic servoactuators	Feb	53
Jasumback, T., Piloted valves control system pressure of forestry yarder	Jun	58
Keen, M. D., LSHT Hydraulic motors power pipelay reel	Nov	53
Keir, J. B., Hydraulic system compensation conserves lift truck power	Sep	120
Keller, G.R., Fine-tune accumulator selection by calculating polytropic exponent K	Feb	100
Kowal, L., Know your hoses, tubing and fittings, Part 7: A guide to good tube working practices	Aug	54
Mackin, C.L., Fluid power in Fortune's 500	Aug	85
MacLennan, W.D., Novel combinations of fixed and variable pumps save energy	May	57
Martin, H.R., Noise analysis and control in fluid power systems		
Part 1: fundamentals, pressure and power level calculations, and measurements	Jan	296
Part 2: basic instrumentation and octave band filters	Mar	91
Part 3: source of noise	May	118
Middleton, F., Fluid logic sweetens sugar cane planting	Oct	142
Nair, K. S., Air fixture tests airplane canopies	Sep	84
Novak, P. R., P.E., Cartridge valves and valves packages: a primer	Dec	44
Paine, W.W., Calculatiog pressure drop in hydraulic hose lines	Jun	110
Roberts, W.P., Palletizer stacks pneumatically	May	64
Robson, N.H., Drain the traps and save the compressor	Mar	189
Seibert, R.W., Know your hoses, tubing, and fittings, Part 6: Testing hydraulic hose	Jul	57
Snyder, D. H., A padful of pneumatic design tips	Nov	57
Swansbro, R. L., Hydraulics extends radio observatory's celestial ear	Oct	137
Thomas, J.E., Selecting electric motors to drive hydraulic pumps	Jul	63
Thornton, G., Stacked pneumatic cylinders automate conveyor belt operations	Nov	96
Vilenius, M.J., Pneumatics helps light the sky	Jul	53
Virvalo, T.K., Pneumatics helps light the sky	Jul	53
Weil, M.S., Face to face		
Ace Controls Inc.	Jul	70
Aeroquip Corp.,	Aug	78
Airoyal Company	Feb	88
The C.A. Norgren company	Jan	263
Pall Corp.	Jun	90
The Paquin Co.	Mar	106
Sundstrand Corp.	Apr	114
Watts Fluidair	May	96
Wolf, R. J., Hydraulics extends radio observatory's celestial ear	Oct	137

The first part of this index appeared in the January 1983 issue of HYDRAULICS & PNEUMATICS, pages 244 and 246.

C27